

Ground Water Quality Standards

N.J.A.C. 7:9C

NJDEP

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The Ground Water Quality Standards (GWQS) rules establish the designated uses of the State's ground waters and specify the ground water quality criteria and antidegradation policies necessary to attain and maintain those designated uses. The ground water quality criteria are numeric values assigned to each constituent (pollutant) discharged to ground waters of the State. The GWQS also contain technical and general policies to ensure that the designated uses are adequately protected.

Ground Water Classifications and Designated Uses: Ground water is classified according to its hydrogeologic characteristics and designated uses. Designated uses are assigned as primary or secondary uses of ground water and include maintenance of special ecological resources; provision of and conversion to potable water; agricultural and industrial water supply; and other reasonable uses. The GWQS rules establish three major classes of ground water:

- ◆ **Class I Ground Water of Special Ecological Significance:** Class I includes ground water within watersheds of FW1 surface waters, State-owned Natural Areas, and the major aquifers of the Pinelands Area. The primary designated use for Class I ground water is the maintenance of special ecological resources. Secondary uses include potable, agricultural and industrial water. Class I has three subcategories: Class I-A, Class I-PL (Pinelands Protection Area), and Class I-PL (Pinelands Preservation Area). Each subclass is defined based on specific aspects of the designated use(s) it was established to protect.
- ◆ **Class II Ground Water for Potable Water Supply:** Class II ground waters are designated for use as potable water supplies. Class II ground water includes all areas not designated as Class I or Class III. The primary designated use for Class II ground water is provision of potable ground waters with conventional treatment at current water quality (Class II-A) or after enhancement or restoration of regional water quality (Class II-B). The ground water quality criteria for all Class II ground waters are health-based concentrations of constituents above which would pose an unacceptable risk for human consumption as drinking water.
- ◆ **Class III Ground Water with Uses Other Than Water Supply:** Class III ground waters are not suitable for potable supplies due to natural hydrogeologic characteristics or natural water quality. The primary use of Class III-A ground water is release or transmittal of adjacent ground or surface waters, Class III-B ground water are designated for any reasonable use at existing water quality, other than potable water. The GWQS rules establish narrative descriptions of these classifications and their corresponding criteria, which are determined by the Department on site-specific, case-by-case basis.

The GWQS rules contain figures illustrating the geographic boundaries of Class I-PL, Class III-A and Class III-B ground water in New Jersey; however, the classification of the ground water related to a specific project or activity is field-verified and confirmed on a site-specific, case-by-case basis by the appropriate regulatory program within the Department.

Ground Water Criteria, Practical Quantitation Levels and Constituent Standards:

- ◆ **Class I:** The ground water quality criterion for each constituent in Class I-A and Class I-PL (Pinelands Preservation Area) ground water is "natural quality". The criterion is "background water quality" for Class I-PL (Pinelands Protection Area). Class I-A and Class I-PL (Pinelands Preservation Area) ground waters are nondegradation waters.

Class II: The ground water quality criteria for Class II ground water are health-based concentrations of constituents above which the water would pose an unacceptable risk for drinking water. These criteria are derived to protect public health without consideration of analytical feasibility, treatability, and cost. The health-based criteria reflect the most recent toxicological information to ensure adequate protection. The ground water quality standard (constituent standard) implemented by the Department's regulatory programs is the higher of the health-based ground water quality criterion and the corresponding practical quantitation level (PQL). The PQL represents the lowest concentration of a constituent that can be reliably achieved among laboratories within specified limits of precision and accuracy during routine laboratory operating conditions (i.e., the lowest quantifiable concentration). The ground water quality standard for a constituent not found on Appendix Table I is the interim generic criterion listed in Appendix Table II (based on carcinogenicity).

If the Department determines that insufficient information is available to derive a health-based interim specific criterion for a Synthetic Organic Chemical (SOC) that is not listed on Appendix Table 1, the interim generic ground water quality criteria listed in Appendix Table 2 of the GWQS applies, based on the carcinogenicity of the SOC. The applicable interim generic ground water quality criterion is implemented as the constituent standard unless a PQL applicable to the interim generic criteria that is higher than the criterion is approved by the Department and published with the interim generic criterion in accordance with N.J.A.C. 7:9C-1.9(c)3.

- ◆ **Class III:** The ground water quality criteria for Class III ground water are determined by the Department on a site-specific, case-by-case basis pursuant to N.J.A.C. 7:9C-1.7(e)-(f).

New/Revised Constituent Standards for Class II Waters: New or revised ground water quality standards are promulgated as amendments to the GWQS rules pursuant to the New Jersey Administrative Procedure Act (N.J.S.A. 52:14B-1 et seq.) with the following exception. The Department may add a new or revised specific ground water quality criterion to Appendix Table 1 when USEPA adds or revises the carcinogenic slope factor or reference dose data in the USEPA Integrated Risk Information System (IRIS) database on which a specific ground water quality criterion is based, or when the Department adopts a new or revised Maximum Contaminant Level (MCL) in the Safe Drinking Water Rules at N.J.A.C. 7:10 for the same constituent. The higher of the specific ground water quality criterion and the PQL becomes effective as the new ground water quality standard upon publication of a Notice of Administrative Change to the GWQS rules in the New Jersey Register. Under this procedure, public participation in the derivation of the health-based criterion occurs via the USEPA process for updating IRIS or the public comment period for the proposed MCL.

Rule amendments:

The Ground Water Quality Standards rules are amended and readopted as needed to address changes in use classification, antidegradation provisions, and other policies, or because the rules are about to expire and must be readopted pursuant to the New Jersey Administrative Procedure Act at N.J.S.A. 52:14B-1 et seq. For more information about the GWQS, please contact the Bureau of Environmental Analysis, Restoration and Standards, at (609) 633-1441, or visit <http://www.state.nj.us/dep/wms/bears/gwqs.htm>.

